## PATENT ABSTRACTS OF JAPAN

(11)Publication number:

04-215599

(43) Date of publication of application: 06.08.1992

(51)Int.CI.

3/12 B32B H01L 31/042

(21)Application number: 02-400996

(71)Applicant:

MITSUBISHI ELECTRIC CORP

(22)Date of filing:

10.12.1990

(72)Inventor:

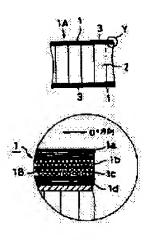
OTSUKA MASATO

## (54) SUPER-LIGHTWEIGHT SANDWICH PANEL

## (57) Abstract:

PURPOSE: To increase the flexural strength of a super-lightweight sandwich panel used to a solar cell of an artificial satellite by forming unidirectional carbon fiber reinforced plastics into a skin of four-layer structure, in which the fiber direction on the outsides is arranged to intersect perpendicularly to the fiber direction of the middle two layers, and bonding this skin to the surface of an Al honeycomb core.

CONSTITUTION: From unidirectional carbon fiber reinforced plastic a skin 1 is formed in foure-layers structure consisting of No.1 layer 1a thru No.4 layer 4d. They are laminated in such an arrangement that the No.1 and No.4 layers 1a, 1d arelaid in a fiber direction of 0°, while the No.2 and No.3 layers 1b, 1c are in a fiber direction of 90°. This skin 1 is bonded to the surface of an Al honeycomb core 2 with an epoxy adhesive 2 to yield a super-lightweight sandwich panel 1A.



## LEGAL STATUS

[Date of request for examination]

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of rejection]

[Date of requesting appeal against examiner's decision of rejection]

[Date of extinction of right]

Copyright (C); 1998,2003 Japan Patent Office